UNION CARBIDE

—Y-12 BULLETIN

A Newspaper For Y-12 Employees of Union Carbide Corporation—Nuclear Division

VOL. 21 — NO. 32 OAK RIDGE, TENNESSEE Wednesday, August 30, 1967

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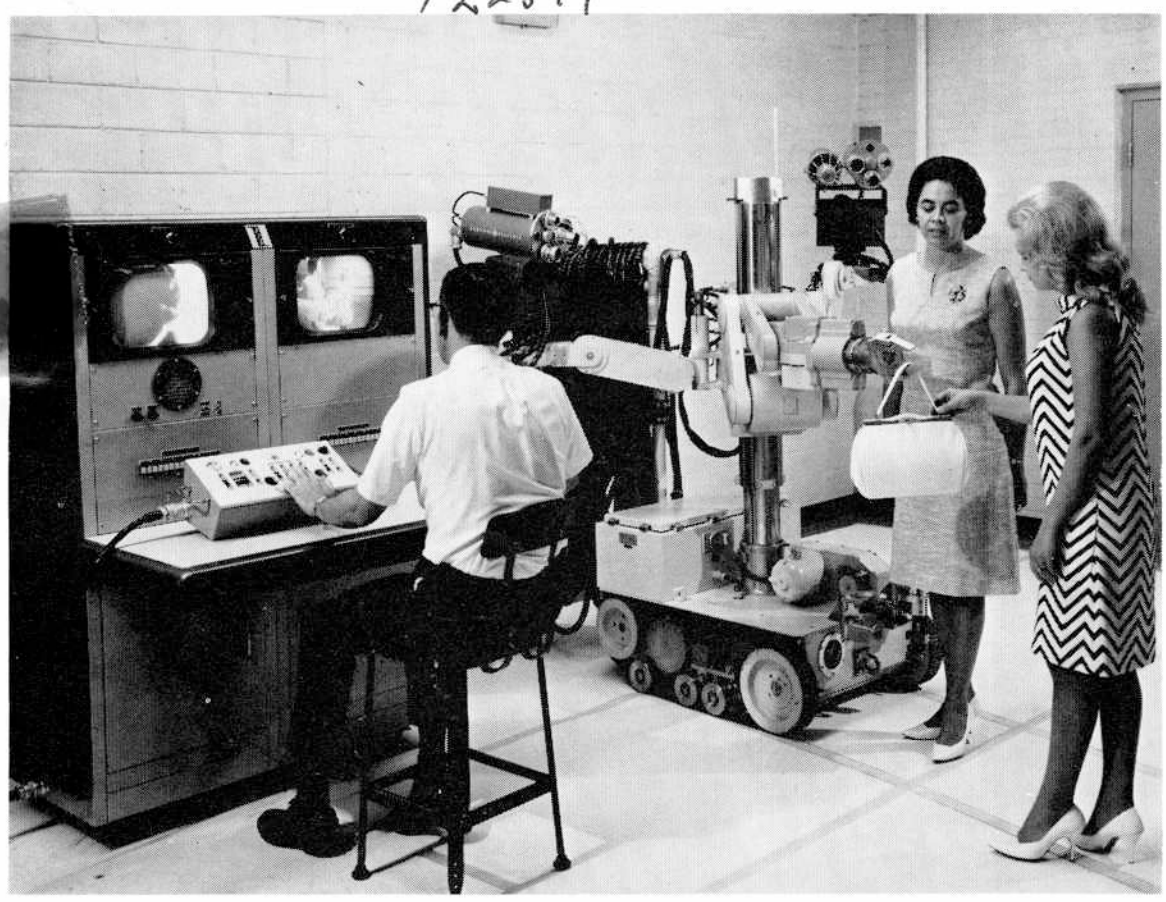

PURSE-SNATCHING IS TAUGHT the mobile manipulator. The 'robot' was recently acquired by the plant for use in emergency situations to perform tasks of lifting or retrieving. It can be operated by a control console at distances up to 350 feet and can lift a wieght of 200 pounds, acting in a hostile environment where man can not go. C. W. Davidson is the "Fagan" while Joe Bratton and Donna Ferguson observe the Oliver Twist act.

Y-12 Milestones

1943—Ground was broken for the first building on February 1, 1943. Chemical operations for electromagnetic separator charge preparation began October of that year, and the first electromagnetic separator was started up in November.

1944—The first production building went into operation on January 27, and conversion of highly enriched uranium-235 to UF_4 began in November.

1945—Uranium recovery began in January. On September 22, all electromagnetic separators used to produce low-level enriched U-235 were shut down, since the Oak Ridge Gaseous Diffusion Plant was supplying a sufficient amount of partially-enriched feed for the product-level electromagnetic separators.

1946—All magnetic separators were discontinued as production units on December 23.

1947—Union Carbide Corporation replaced Tennessee Eastman as operating contractor on May 4.
Enriched uranium-235 produced by the gaseous diffusion process was reduced to metal and fabricated at Y-12 in accordance with AEC requirements.

1948—Machining of enriched uranium on a small scale was started early in the year.

1950—Hafnium-free zirconium production was started in January for use in the Naval Reactor program. The casting and machining of uranium-aluminum alloy and the first large-scale precision machining of beryllium began.

1953—Additional uranium casting facilities and another uranium machining shop were installed and completed. A hydraulic pressing facility was added in October.

1954—An expansion of the enhanced-uranium salvage facility was completed early in the year.

1955—Installation of additional uranium casting facilities was completed.

1956—An accelerated program of providing technical information and assistance to industry interested in uranium salvage and recovery operations began.

1957—Installation of a Primary Rolling Mill and further pressing facilities for fabricating uranium were completed.

1958—Installation of a heavy machine shop for uranium fabrication was completed. A second rolling mill for uranium was installed.

1959—Development and special fabrication service in pressing and machining of tungsten was provided for the missile program. AEC announced public sale of highly enriched lithium-7.

1960—Specialized development and preproduction fuel ele-

Continued on Page 2

'Welcome To Y-12'

ROGER F. HIBBS
Plant Superintendent

On behalf of my fellow employees, I sincerely welcome you to the Y-12 Plant. We are extremely pleased to participate in the Oak Ridge 25 celebration—particularly so because our plant is very much a part of the Oak Ridge heritage.

We are proud of our past and present roles in strengthening our nation's defenses. Through these achievements, our employees have earned a reputation for skill, versatility, and a pride of workmanship that is difficult to match.

Because of classification, safety, and production considerations, only one building in the plant is open for public display. However, a tour of this Electrical and Electronics Department facility should enhance your appreciation of the meticulous standards of accuracy to which we adhere in our technical projects.

Y-12 Sticks To Old Code Name Given In Hectic Days Of 1943

Oldest Plant In Oak Ridge Shows Vivid History From Ground-Breaking, Through War, To Date

The U.S. Atomic Energy Commission has said of Y-12: "The capability and versatility of Y-12 are now proven assets to the United States nuclear energy effort. As the highly-skilled personnel of Y-12 continue to perform difficult production and engineering jobs, frequently on lightning schedules, they add immeasurably to the nation's defense posture while at the same time advancing the peaceful application of the atom."

Y-12 is the only AEC complex left in this area that still clings to its old code name. Oak Ridge National Laboratory was formerly Clinton Laboratories and X-10, and Oak Ridge Gaseous Diffusion Plant was originally called K-25. Many descriptive names have been considered for the plant, but the variety of activities precludes a simple title, so the old code name has stuck.

To understand a little about Y-12, one must study its hectic history. Built during World War II on a crash basis (there wasn't even a pilot plant designed prior to construction), ground-breaking took place in a veil of secrecy on February 1, 1943. Designed originally to separate uranium-235 (the fissionable isotope of uranium) by the electromagnetic process, Y-12's purchase price came high . . . almost a half a billion dollars. Purchasing during the commodity-shortage period was no problem, as the "project" enjoyed purchasing priority even over direct munitions and war materials.

More Than 20,000 Filled Plant To Capacity In Early Days

The extremely complicated process of electromagnetic separation was developed by the late Dr. E. O. Lawrence at the Radiation Laboratory at Berkeley. Nearly 23,000 operating personnel worked in Y-12 at that time. (Tennessee Eastman Corporation operated the plant from its beginning until May 4, 1947 when Union Carbide Corporation became the prime contractor.)

Uranium-235 separated at Y-12 was the fissionable materials used in the world's first uranium bomb, "Little Boy," which was detonated August 5, 1945.

After the end of World War II, the electromagnetic isotope separation process was discontinued in favor of the more economical gaseous diffusion process.

Since those early war years, Y-12 has been converted into a highly sophisticated manufacturing and development engineering organization, utilizing some of the most advanced techniques and facilities known anywhere in the world.

Plant Contains More Floor Space Than Empire State Building

The plant itself staggers the imagination in size . . . about two and one-half miles long and one-quarter mile wide. The combined floor space of the several hundred buildings inside the plant complex is of the order of 4,500,000 square feet. (This is more than twice the rental space available in the Empire State Building!) A lot of this space is under very rigid environmental control.

Since Y-12 is basically a materials processing organization, it is equipped with facilities for materials preparation, fabrication, machining, and assembly. Examples include chemical processing equipment, vacuum casting furnaces, to name only a few. There are over 1,500 machine tools located in the plant, ranging in size from a small jeweler's lathe to 120-inch vertical turret lathes. Many of these tools are designed to work to very high precision, and a number of them are numerically controlled through computer-produced tapes which guide them through their motions. Furthermore, some have been equipped to machine reactive or toxic materials.

There are approximately 4,500 personnel in Y-12, including 500 scientists and engineers, as well as 1,200 to 1,500 skilled craftsmen. These people, together with the necessary supervisory and supporting employees, operate a variety of facilities to accomplish the programs assigned by the AEC. This combination of skilled people and modern facilities is currently being applied to four major responsibilities.

Other Fields Of Responsibility Cover Aspects Of Production

The first, of course, is our production responsibility in the field of nuclear weapons. This highly classified work is of vital importance to our nation's defenses.

Secondly, Y-12 acts in the capacity of fabrication support

Continued on Page 2

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POSSIBLY THE PUREST URANIUM ever refined was produced here in Y-12. Y-12 development chemists refined small samples of the metal to less than 30 parts per million total impurities. Jeanette Bieber holds an ultra-high-purity uranium rod to be used in materials research.

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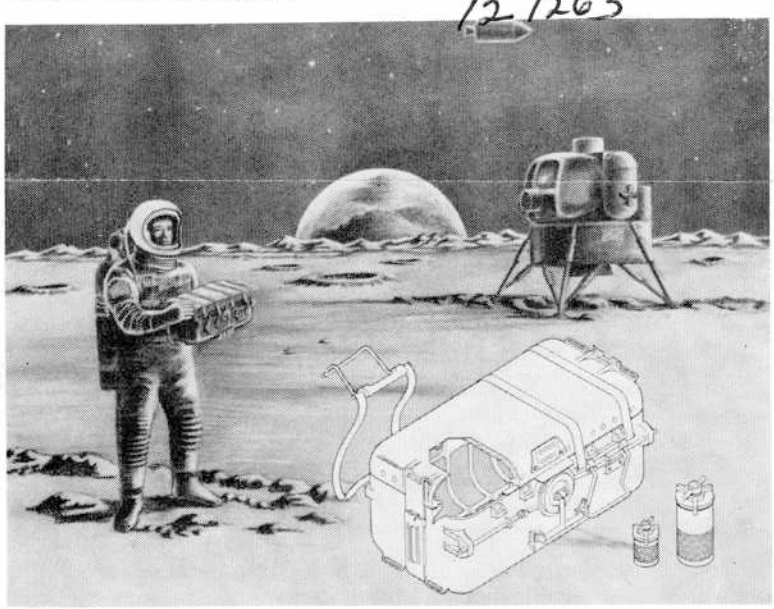

VACUUM CONTAINERS FOR USE OF APOLLO ASTRONAUTS were designed and fabricated in Y-12. The box-like containers will be used to collect samples from the surface of the moon. They are made of forged aluminum and are designed to maintain a pressure equivalent to 1/100,000 that of the earth's atmosphere.

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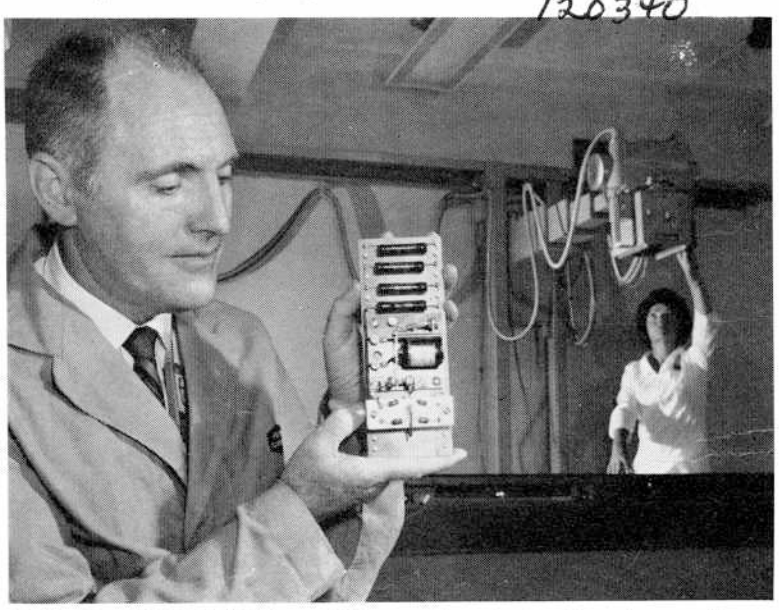

A Y-12 INNOVATION receiving national attention is a voltage sensing device to prevent personnel from being accidentally exposed to X-radiation used in research or in medical examinations. The sensor serves as the ultimate monitor to determine if any X-ray machine is operating, even when the control panel indicates otherwise because of a malfunction. The sensor system was developed by E. W. Pipes.

Y-12's Vivid History

Continued from Page 1

of the weapon design laboratories: The Los Alamos Scientific Laboratory at Los Alamos, New Mexico; the Lawrence Radiation Laboratory, Livermore, California and the Sandia Corporation, Albuquerque, New Mexico, and Livermore, California. In support of these activities, Y-12 produces most of the components for test devices that are fired — including Plowshare devices for the peaceful use of atomic explosives. In addition, a large amount of the experimental hardware required by these organizations is made here. We also conduct a substantial amount of development for the laboratories.

The third major mission is the support of the Oak Ridge National Laboratory, one of the nation's leading research centers. There are about 1,000 ORNL employees located in Y-12. These scientists and engineers work for the Biology Division, the Reactor Division, the Thermonuclear Division, and the Isotopes Division. In addition to the usual housekeeping and maintenance services, we supply the facility engineering required by these groups. A large amount of specialized fabrication work is done for the Laboratory. For instance, Y-12 fabricated major components for the Molten Salt Reactor Experiment, the High Flux Isotope Reactor, the DCX fusion experiment, and the Oak Ridge Isochronous Cyclotron.

The fourth mission of the plant is the maintenance of a research and development program designed to improve production methods and plant processes and to perform necessary speculative research.

Non-Weapon Problems

Because of the Plant's vast reservoir of industrial and scientific skills, many problems have been brought to Y-12 that are not related to weapons. Problems involving chemistry, engineering, metallurgy and fabrication developments are often solved here. Recent noteworthy achievements include: production of fuel elements for the nuclear rocket program, tungsten components for the missile program, exotic material items, biomedical engineering assistance, and solution of space-related problems. Much of the unclassified technology developed at Y-12 is made available to private industry through technical publications in accordance with the AEC's technological spinoff program.

Y-12ers are proud of their accomplishments of the past. Their contributions to the development of Oak Ridge and the atomic age are significant milestones in man's search for a better life. Coupled with the pride in past accomplishments is the sure knowledge of tomorrow's challenge, and the knowledge that the plant's potential will measure up.

Milestones

Continued from Page 1

ment fabrication for the nuclear-powered rocket (ROVER) program started in August.

1962—AEC authorized Y-12 to provide specialized fabrication service for a missile nose cone.

1963-1965—During this period Y-12 fabricated radiation shields for the SNAP Program, made high-temperature-resistant ceramic tubes for controlled fusion experiments, cast pure gold collimators for medical diagnostic equipment, rolled uranium to 10-mil thickness, precision machined reactor components, prepared seismographic gauges to measure the intensity of underground blasts, and designed and fabricated a unit to irradiate blood samples aboard a Gemini flight.

1966-67—This period is characterized by numerous developments involving numerically-controlled fabrication and inspection machines, new computer applications and increased use of laser interferometry. Development of automated air monitoring systems, automatic welder, automatic tool-setters, computer-controlled gage head calibrator, voltage sensor, and heat sensing unit for biological and machining applications. Design, fabrication and testing of vacuum containers for collecting lunar geological samples begun. Y-12 assigned important role in the production of nuclear components for more advanced weapon systems.

Y-12 also became the site of the Training and Technology Project to assist in the training of vocational teachers and of under-employed men and women. Project sponsored by Oak Ridge Associated Universities, U. S. Atomic Energy Commission, Union Carbide Corporation, and the University of Tennessee, with the support of the U. S. Department of Labor.

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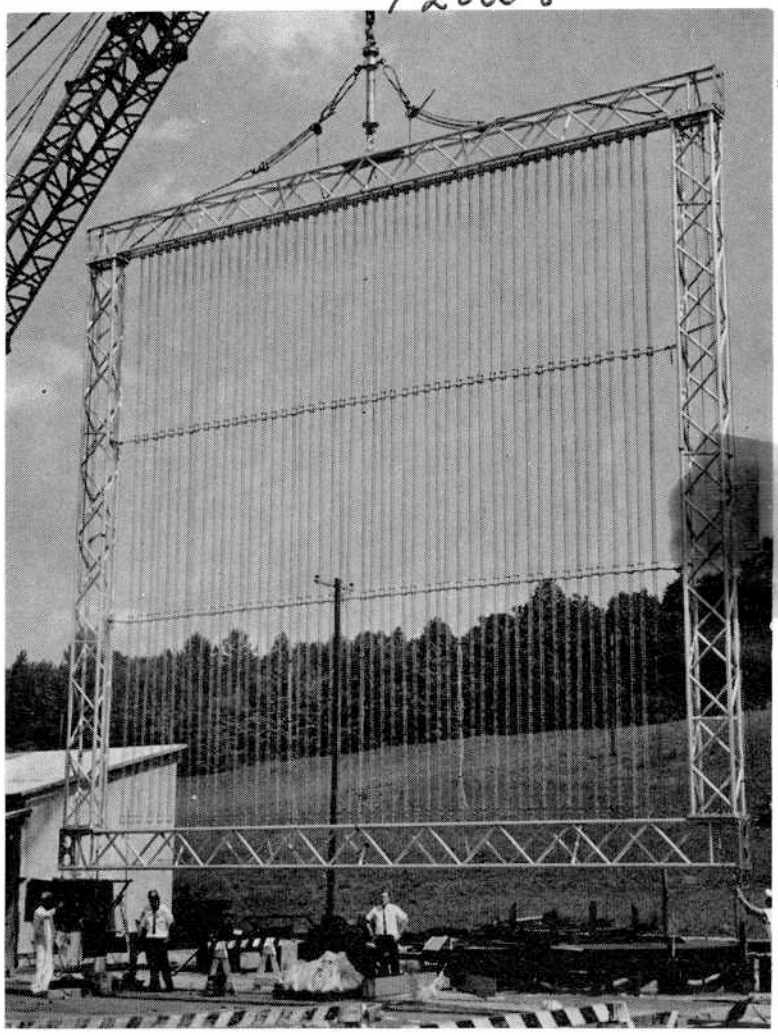

FABRICATED IN Y-12 for the Naval Research Laboratory, this device is used in underwater sound experiments. The unit required over 4,000 precision welds, many of which were performed by semiautomatic welding procedures. The rig is only one example of Y-12's versatility.

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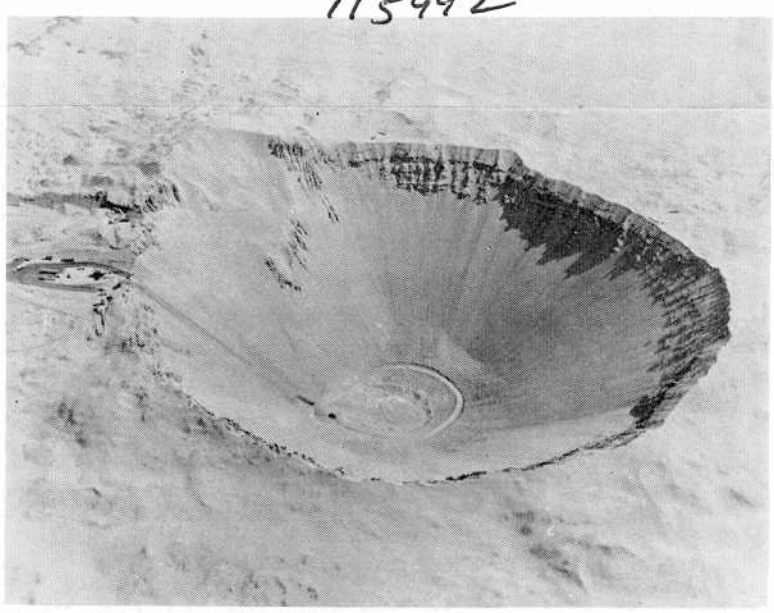

PROJECT SEDAN CREATED a crater 320 feet deep and nearly a quarter of a mile wide in a demonstration of the excavation capabilities of nuclear devices. Major components of the 100-kiloton device were fabricated at Y-12. The microscopic dots to the left of the crater are actually huge trucks and earth-moving machines.

HELPLESS CREATURE

'Man is the only one that knows nothing, that can learn nothing without being taught. He can neither speak nor walk nor eat, and in short he can do nothing at the prompting of nature only, but weep.' Pliny the Elder.

The Bulletin

Published Weekly For The Y-12 Employees Of UNION CARBIDE CORPORATION

UNION CARBIDE

NUCLEAR DIVISION

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American Association Industrial Editors

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Genial Ben Easter Retires Thursday

6-13529

Ben A. Easter

Y-12's only retiree for August is well-known and well-liked Ben A. Easter, 9766 Machine Shop.

Easter, a native of Kingston, came to Y-12 June 17, 1952, in Health Physics and later went into shop maintenance where he has been the past 15 years.

A licensed mortician, Ben spent over 34 years (from 1917 until 1951) with the Lamb & Coulter Funeral Directors, Rockwood.

He presently lives at 211 North Front Avenue, Rockwood, with his wife the former Gladys Mingus. Mrs. Easter is a registered nurse.

The Easters have a home on Watts Bar Lake.

Easter says he has enjoyed his work here because of the many, many fine co-workers and supervisors. He wished to thank each one for his friendship through the years.

Plans to catch up on fishing and quail hunting will occupy part of the retiree's time. (Ben says he's way behind on both.)

The retiree says if you're ever wandering around the Eagle Lodge area, yell out . . . for he'll be close by with Mrs. Easter fishing. (His wife is an expert angler, he says.)

Co-workers send their very best wishes for a happy retirement to Ben A. Easter.

September Is Named Sight-Saving Month

September is set aside as Sight-Saving Month, by the National Society for the Prevention of Blindness, Inc. During this month, the National Society and its State affiliates give special emphasis to alerting every American man, woman and child about vision-threatening diseases, accidents and neglect.

The theme of Sight-Saving Month is "Early Detection for Early Correction."

CPS Courses Set In Evening Classes

Special courses in preparation for the Certified Professional Secretary Examination have been scheduled to begin in September. Under the sponsorship of the Oak Ridge Chapter of The National Secretaries Association (International), the following UT and Adult Education courses will be offered at the Oak Ridge High School: Accounting 2110 (UT)—Monday, 6:30-9:20 p.m.; CPS Business Law (Adult Education) — Wednesday, 6:30-8:30 p.m.; Office Administration 443 — Secretarial Procedures (UT)—Thursday, 6:30 -9:20 p.m. (Mildred Scott, Plant Shift Superintendents Division, will be the instructor for the Business Law course.)

Advanced Shorthand and Business Administration 111 are planned for the Winter quarter; in the Spring quarter CPS Skills Review is tentatively set.

All classes will be held at the Oak Ridge High School, and all are approved under the Carbide Education Assistance Program, for partial reimbursement upon satisfactory completion of the work.

Registration for the Adult Education classes will be held September 11 through 15; and UT Evening School classes will register from September 18 through 20.

The management of our company and that of many others recognize and appreciate more and more the qualifications of the secretary who has earned the CPS title. The Oak Ridge Chapter of NSA wants to help anyone interested in becoming a CPS by sponsoring courses geared to education needs to meet the test requirements.

Membership in the NSA is not a prerequisite for taking the CPS Examination. The above scheduled classes not only provide advantages of CPS testing but also fall in a program of self-improvement for anyone in the secretarial field.

Interested parties should contact Mabel Tyer, extension 3-7121, or write to her Building 9704-2, Y-12.

Army-National Guard Officers' Classes Set

Army Reserve and National Guard Officers needing certain educational qualifications for promotion may get these qualifications by attending two-hour classes and receiving retirement point credits in either Oak Ridge or Knoxville. Officers needing credit for the Career Course to enable promotion through lieutenant colonel should contact J. K. Kitchings, extension 3-4251. Officers needing credit for the Command and General Staff Course to enable promotion to full colonel should contact T. F. Wagner, extension 3-4442.

This Issue Is Special Y-12 Bulletin Edition

This is a 'special exclusive' edition of The Bulletin. The outside pages will be given to visitors in the plant this week-end, September 2 and 3.

Only employees are getting the full six page treatment in this issue.

You may like to keep this special issue as it contains information on the history and function of the plant.

If you are among the special visitors Saturday and Sunday, there's no need to pick up a Bulletin. You already have yours!

September, with its beginning of school, the end of summer, etc. edges its foot in the door. Edging into veteran status with Union Carbide Corporation are several Y-12ers. Congratulations.

20 YEARS

Ray P. Walker, H-2 and F-Area Shops, September 5.

15 YEARS

Aurtha W. Mastin, Janitors Department, September 4.

Dean A. Ford, SS Warehousing and Shipping, September 5.

Emanuel G. Laggis, Chemical Engineering Development, September 5.

Carl G. McCulley, SS Warehousing and Shipping, September 5.

10 YEARS

Harry L. Bailey, Assembly Operations, September 3.

Charles E. Oldham, Civil and Architectural Engineering, September 3.

Clay Parrott, Chemical Engineering Development, September 3.

Dorris N. Smith, Electrical Department, September 3.

Ride wanted, or will join car pool, from Harrison Hills, Lenoir City, to West Portal, straight day. Pat Hair, plant phone 3-5221, home phone Lenoir City 986-2602.

Ride wanted from Rambling Acres, Knoxville, to Central Portal, straight day. B. J. Jones, plant phone 3-6506.

Will join car pool from West Knoxville, near Cumberland Estates, to Biology Portal, straight day. William Henry, plant phone 3-7765.

Will join car pool from Norwood area, Knoxville, to Central Portal, straight day. Eugene Keith, plant phone 3-6568, home phone Knoxville 689-2229.

Ride wanted from Ball Drive, Knoxville, to Bear Creek Portal, straight day. C. F. Pirkle, plant phone 3-7176, home phone Knoxville 588-3162.

Monday Is Holiday For Most Y-12ers

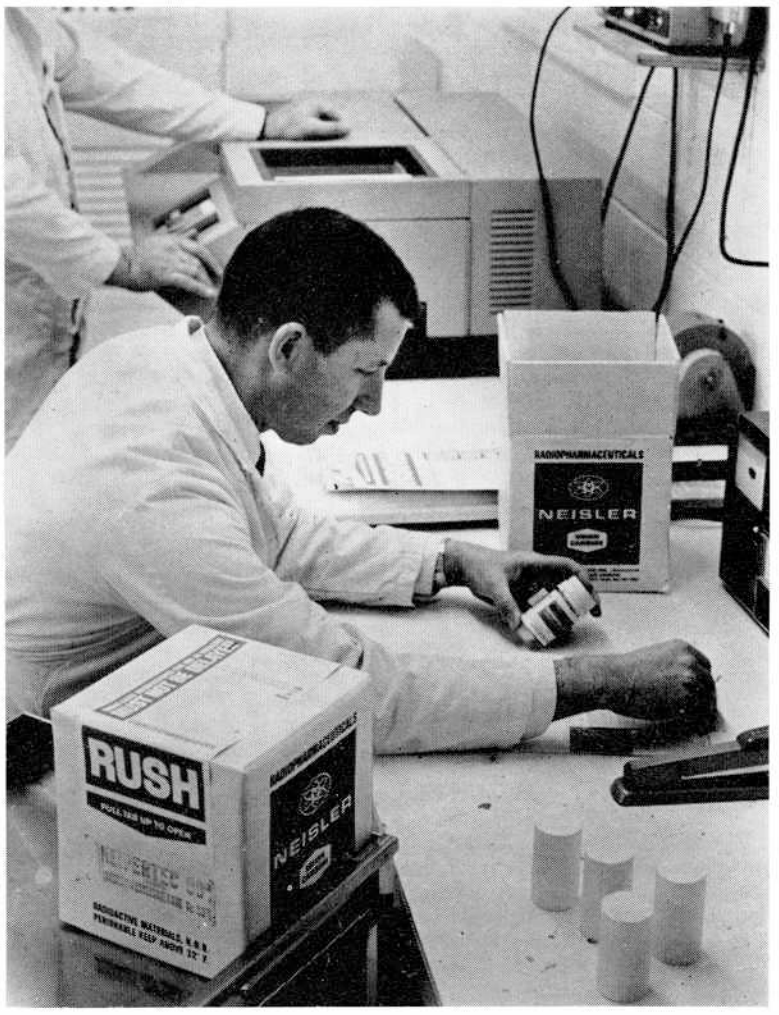
Monday, September 4, is a holiday for Y-12ers. Labor Day is the oldest official holiday the Nation observes, as it pays tribute to its muscles and brawn of its laboring forces, the greatest on earth.

No employee will be required to work, except those whose presence is required for the protection or continuous operation of the plant.

Northeastern's Cromer Is Seminar Speaker

A joint Physics-Electronuclear Division seminar will be held this week, featuring A. H. Cromer, Northeastern University. His subject will be "Recent Calculations of Proton - Proton Bremsstrahlung."

The seminar is scheduled for Friday, September 1, at 3:15 p.m. in the East Auditorium of ORNL's 4500 Building.



'THE MIGHTY ATOM' will be seen this Sunday on 'The 21st Century,' from pharmaceuticals to the generation of electricity. Special interviews on the program include talks with Glenn T. Seaborg, and Alvin Weinberg. The telecast will be seen at 7:30 p.m. Sunday, September 3, over Channel 10, WBIR-TV. The program is in color, and sponsored in the public interest by Union Carbide Corporation.

'The Mighty Atom' Is Subject Of '21st Century' Telecast Sunday

The energy released from a one inch cube of uranium could light the average home for 9,000 years —longer than recorded history. This is only one example of the nearly limitless potential of the atom reported on "The 21st Century." broadcast Sunday. "The Mighty Atom" will be screened Sunday, September 3, at 7:30 p.m. EDT over Channel 10, WBIR-TV. (The program is delayed for one and a half hours for next Sunday only. Its regularly scheduled time is 6 p.m.)

CBS News Correspondent Walter Cronkite is principal reporter for the series which is sponsored in the public interest by Union Carbide Corporation.

Far-reaching projects in atomic research are reported: nuclear medicine in the areas of diagnosis and treatment of cancer; power generators, including one the size of a baseball; and research to develop a "bottle" of magnetic fields capable of withstanding a temperature hotter than the sun's interior needed to unlock the potential of atomic fusion.

The peaceful future of atomic energy is reported in interviews with leading atomic scientists, including Dr. Glenn T. Seaborg, Nobel Laureat, Chairman of the U. S. Atomic Energy Commission, and Dr. Alvin Weinberg, director, Oak Ridge National Laboratory, operated by Union Carbide for the Atomic Energy Commission.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated
12 Days Or
332,000 Man-Hours
(Unofficial Estimate)
Through August 27
Without a Disabling Injury
Safety At Home
At Work, At Play

'King And I' Final Tryouts Next Week

Final tryouts for adults will be held at the Oak Ridge Playhouse next Wednesday, September 6, for the musical, "The King and I." A total of 50 men and women of all ages are required for the many excellent roles in the popular show. Auditions will begin at 7:30 p.m. and will continue until everyone has been heard. Music will be provided for those who cannot bring their own.

"The King and I" is based on the story of Anna and the King of Siam, and the big cast includes Anna, an English widow with a 12-year-old son, Louis; the king himself; his many wives and attendants; an English diplomat; and a ship's captain.

Tryouts are open to anyone in the area. No previous experience in the theatre is necessary, but good singing voices are required. Anyone interested in the tryouts but unable to attend on September 6 should contact Director Paul Ebert, at Oak Ridge telephone 483-6193.

Labor Day Will Delay Next Week's Bulletin

Next week's Bulletin will be delayed one day because of the Labor Day holiday. Normally, the paper is "put to bed" and printed on Mondays. Next week's issue (dated September 6) will not go to press until Tuesday.

This will delay the paper going into the mails.

6-13485

Y-12ers Sweep Skeet Top Honors

August Skeet firings were dominated by Y-12ers, as all three winners hit the big time. R. A. Allstun scored a 49.525 handicap total to ace-out on top. He was followed by Carl Brewster with a 48.878, and R. Powers with 48.845.

The next scheduled tournament is Sunday, September 3, at the Oak Ridge Sportsman's Association Range. All Carbiders are welcomed to the shoot, and newcomers are especially welcome.

Other Skeeters' Scores:

Firer	H'Cap Score
R. Powers, Y-12	48.845
F. S. Patton, Y-12	48.645
C. Asmanes, Y-12	46.305
R. A. Allstun, Y-12	49.525
D. Fry, ORNL	48.240
R. Morgan, ORNL	47.280
C. G. Brewster, Y-12	48.878
F. A. Stewart, Y-12	47.600
J. G. Worley, Y-12	47.440
H. D. Wills, ORNL	47.403
L. M. Bray, Y-12	48.240

Rein-Case Lead Horseshoe League

The ORNL pair Rein-Case dominate the last half of the Horseshoe League thanks to an open date last week. They sport a nine win-no loss record.

The Helms-Lucke pair took a nine-point forfeit win from Kendig-Zupan . . . and the Coley-Raper team won four from Luckett-Barker. Taking eight were Durham - Harness from Hutton - Tillery.

League standings follow:

Team	W	L
Rein-Case, ORNL	9	0
Coley-Raper, Y-12	16	2
Helms-Lucke, Y-12	12	6
Luckett-Barger, ORNL	11	7
Durham-Harness, ORNL	8	1
Leonard-Gray, ORNL	6	3
Hutto-Tillery, ORNL	1	17
Matheny-Miller, ORNL	0	9
Kendig-Y-12-Zupan-ORNL	0	18

Farm And Forestland Appointment With Fate

Farm and forestland it was in 1943, when the U. S. Government started a gigantic construction project in Oak Ridge. Among the companies asked to help were several divisions of Union Carbide Corporation.

Union Carbide was already processing uranium - bearing ore from the Colorado Plateau. In the early 30's, the company was processing carnotite for its vanadium content. At the start of World War II, plants were redesigned so that uranium could also be extracted from the ore.

THAT'S LIFE

'Life is what happens to you while you're making other plans.' Robert Balzer.

Winstead-Ferguson Top Melton Greens

The Winstead - Ferguson team jumped into the lead of the Melton Hill Golf League last week with a six-point win over the Alvey-Gamble pair. Other sweep wins went to Nelson-Tiller over Boyd - Sise; Hamby - Braden over Thomason (for the Thomason - Hopwood team); Roberts - Arnold over Bryant (for the Henderson-Bryant duo); and Huddleston - Cadden over Cofer, firing alone for the Grubb-Cofer team.

A five point win was picked up by McGinnis-Burris over Wright-H. Butler; and four points went to Brown-Gresham over T. Butler (for the Butler-Carter team); and Thompson-Rogers over Clabough-Nobles.

Low scratch scores were carded by Burris and Ferguson, each with 41; Tiller, Wright, Nobles, Brown and Hamby scored 42.

In handicap scores it was Ferguson with 35; Gresham, Burris, Thompson and Tiller with 37; and Huddleston and Nobles with 38.

League standings follow:

Team	W	L
Winstead-Ferguson	20	4
Nelson-Tiller	18	6
Brown-Gresham	17	7
Thompson-Rogers	17	7
McGinnis-Burris	16	8
Wright-H. Butler	15	9
Hamby-Braden	14	10
Cofer-Grubb	13	11
Hogg-Huffman	13	11
Roberts-Arnold	13	11
Huddleston-Cadden	13	11
Boyd-E. Sise	10	14
Bryant-Henderson	8	16
Clabough-Nobles	8	16
Morehead-Poly	7	17
T. Butler-Carter	7	17
Alvey-Gamble	5	19
Thomason-Hopwood	2	22

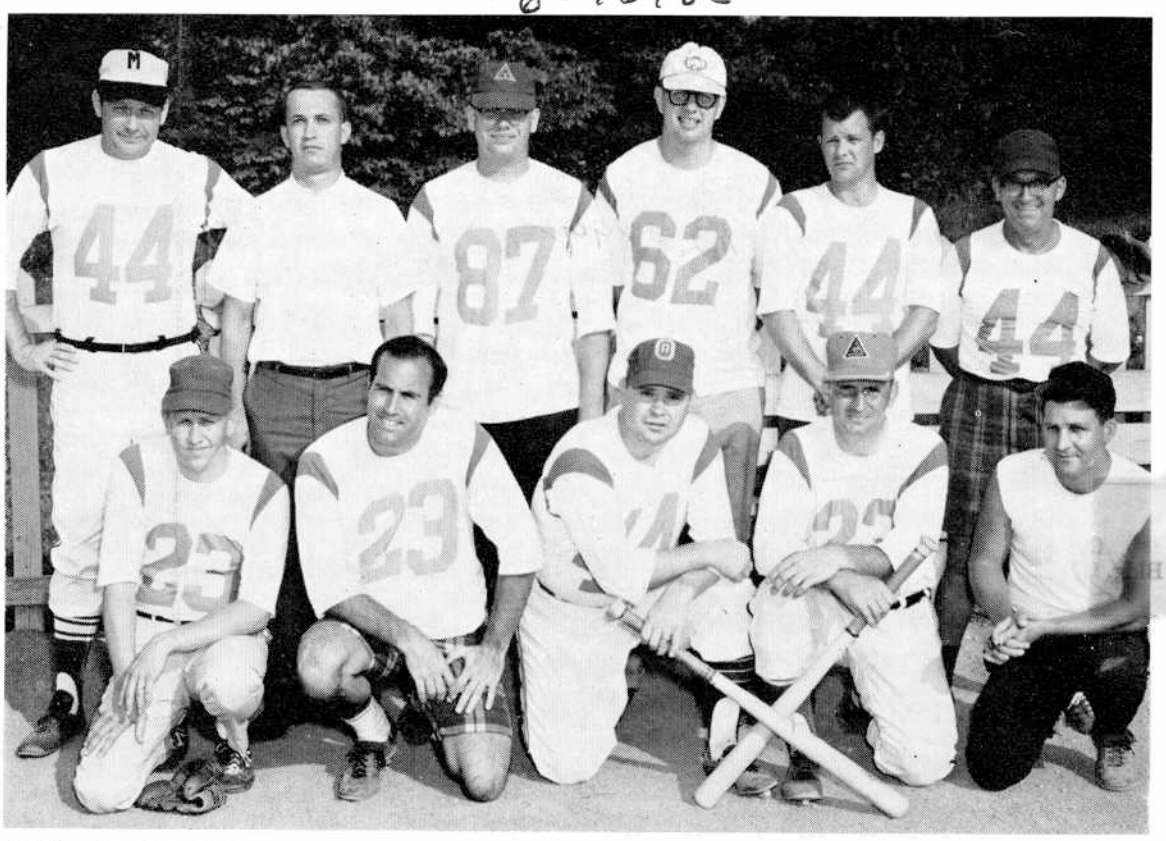
Bowling Subs Pages For All Three Leagues

Three bowling teams are rarin' to go. The Mixed League rolls next Wednesday, September 6 . . . the Classic starts the next night, Thursday . . . and the C League begins Monday, September 11.

The C League, rolling Mondays at 5:45 p.m., is in need of one five-man team. All leagues would like to list substitutes, so if any individual wants to roll in any of the leagues, just give Recreation a call at extension 3-7109.

AUTUMN HAZE

According to a cigarette advertisement, you can get an "Autumn Haze Mink Stole By Renoir" for 47,185 coupons. If you start smoking at 26, smoke a pack a day, you can give it to her on your 155th birthday! But cheer up, there are four bonus coupons when you buy by the carton. Thus, you can provide the little woman with that fur coat when you're only 119!



MEET THE CHAMPS . . . winners of both halves of the Softball League . . . the big Braves. The Braves won 26 games this summer, and lost only one . . . to another Y-12 team, the Flyers. Kneeling in the front row, from left, are Tracy Vann, Rick Hull, Bobbie Hopkins, Jim Shoemaker and Jim Milligan. Standing are John Evans, Ray Riggs, Steve Babb, Bob Culton, Jerry Babb and Manager Daye Phillippi. Arrangements are being completed for a play-off between the Braves and winners of ORNL's Slo-Pitch League.

Recreation calendar

Saturday, September 2

OPEN HOUSE: Y-12, 9 a.m. - 5 p.m.

Sunday, September 3

OPEN HOUSE: Y-12, 12 p.m. - 5 p.m.

Monday, September 4

LABOR DAY: Official Holiday for Y-12ers.

Tuesday, September 5

GOLF LEAGUE: Melton Hill Course, immediately after work.

Wednesday, September 6

CARBIDE RIFLE LEAGUE: 7 p.m. Clinton Rifle Range.

BOWLING: Mixed League, 8 p.m., Ark Lanes.

Thursday, September 7

ARCHERY LEAGUE: 5:15 p.m. Oak Ridge Sportsmen's Association.

BOWLING: Classic League, 5:45 p.m., Ark Lanes.

HORSESHOE LEAGUE: 7 p.m. City Courts, Jackson Square.

West Downs Del Grande To Take Tennis Crown

Martin West copped the first half of the Tennis League last week by downing Ed Del Grande two matches out of three. Martin took the exciting first set nine to seven . . . Del Grande came back and edged the champ eight to six in set number two . . . then West seized the third one six to three.

Second half action begins this week.

Kingston Golf Match Called As Rains Come!

The Golf Tournament last Saturday, August 26, made history in that it didn't get played! For the first time in the memory of many golfers the rains kept tee-men off the greens.

The Southwest Point, Kingston Tournament has been rescheduled for September 16 . . . and an application appears here. You have to register again, says Recreation!

Y-12 Braves In Finals As Softball Tournament Nears End

Four teams remained "alive" in the double - elimination tournament of Softball last week, as the Y-12 Braves forged to the finals. The Eagles and K-25 Sports were set to face each other Monday, August 28. The winner of this tilt will go against the K-25 Mets . . . and the winner of the match will fight it out with the Braves.

The Braves conquered their first opponent, the Y-12 Pirates 21 to 2 in opening action. Jim Shoemaker and Bobby Hopkins kayoed two homers, while Rick Hull, John Evans, Jim Milligan and Ray Riggs all earned one . . . accounting for eight of the 26 hits earned by the Braves.

Monday's second game pitted the Y-12 Flyers against the Eagles . . . the Flyers edging by 7 to 6. Dave Mason helped the winning cause with a homer . . . as the Flyers got 12 hits to the Eagles' 9.

Two K-25 teams battled out action in Monday's final game . . . as the K-25 Sports sailed over the K-25 Slugs 14 to 7. The Sports' Ralph Clough clouted a homer to help the winning team.

Bat Boys Fall

Tuesday's games began as the K-25 Mets mauled the Y-12 Bat Boys 24 to 6 . . . with almost everybody getting a homerun. Jack Roach reached out and got two four-baggers; Wayne Neff, Whit Whittlesey, Steve Cates, Jim Treadwell, George Harris and Sam Woodfin all poled one apiece.

The Y-12 Eagles advanced by downing the Pirates Tuesday 15 to 3 . . . as Gale Helton hit two homeruns; Fred Mundt and Frank Koon one each. The Eagles earned 20 hits, as the Pirates only picked up six. Four errors marred the Pirates score, also.

In a short game, the K-25 Mets eliminated the K-25 Sports 13 to 1 in Wednesday's opener. The game lasted only 48 minutes . . . as Jim Carden kayoed two four-baggers, George Plunk, West Peters and Whit Whittlesey all knocked one.

Boys Beat Slugs

The Bat Boys booted the K-25 Slugs badly 20 to 5 in Wednesday's second game. George Reece, Dave Hendrickson and Glen Bryson were big heroes with a homer each.

Final play saw the Braves surge to semi-finals with a victory of the Flyers . . . 13 to 0.

Bill Butterini and Jim Milligan made four-bag hits each. The Braves beat out 13 hits, to the Flyers' four.

Braves To Finals!

Thursday's opener saw the Braves advance to finals, by downing their old K-25 enemies the Mets . . . 13 to 7. George Plunk poled the only homer of the game for the losers. Bill Butterini battled out a triple for the Braves, who saw a big inning in number five, driving across six runs, the necessary margin.

The Eagles eliminated the Flyers from competition and earned the right to play in the semis this week, 12 to 11. Hugh Richards ran out two triples for the Eagles, and Bobby Belt belted a homer for the losing squad.

Final play Thursday pitted the Bat Boys against the K-25 Sports . . . the Sports overcoming 14 to 5. Jim Adams, Ralph Clough and Edd Bordes all belted out homers for the winning team.

So, the teams will finish it off this week . . . as the semi-finals were set Monday . . . and immediately thereafter the big finals.

Bowling Leagues Are All Set To Hit Alleys

Bowling time is here again, as alleymen and women from Y-12, rested from their summer hiatus, hit the alleys in force.

The first team out will be the Mixed League bowling next Wednesday, September 6. The Mixed League rolls at 8 p.m. on Wednesdays, at Ark Lanes.

The 16-team Classic League faces its first competition Thursday, September 7. Then the all-men 12-team C League rolls Monday, September 11. Both teams roll at 5:45 p.m. at Ark Lanes.

Follow security procedures.

Tee-Off Time Application For Southwest Point (Kingston) Tourney

Saturday, September 16

Foursome

_____, Leader

_____

_____

_____

Leader's office phone _____

Home phone _____

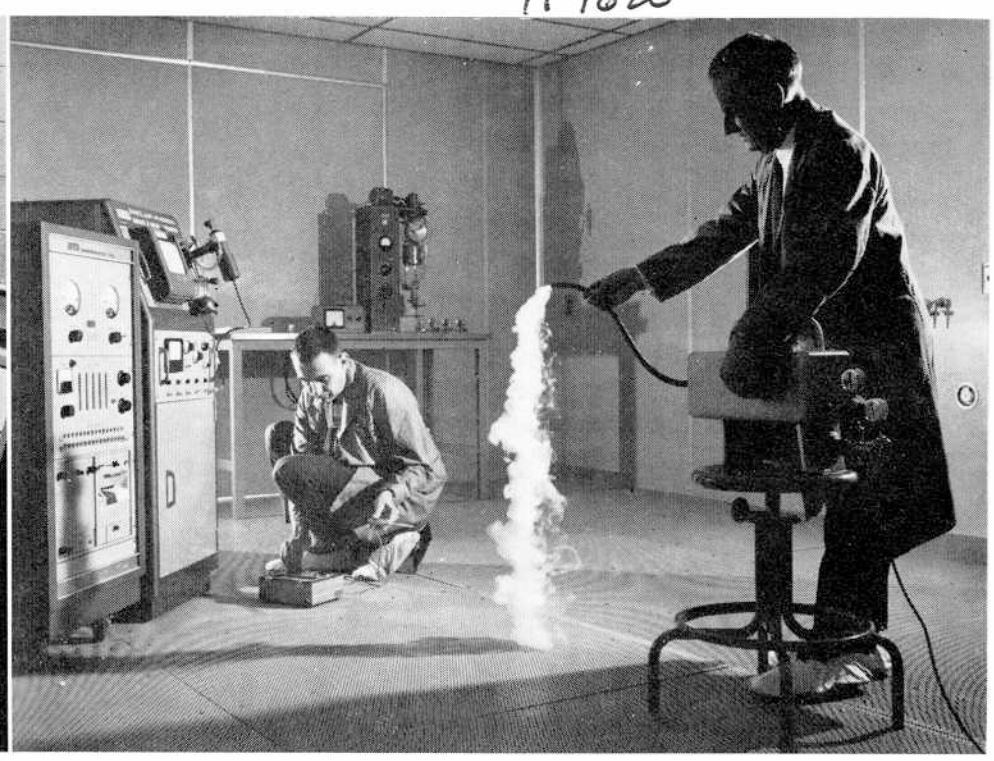
Tee-off Time Preferred _____

Fill out completely and return to the Recreation Office, Building 9704-2. Deadline for entering is 4:30 p.m. Wednesday, September 13. Tee-off times will be drawn the next day, Thursday, September 14 at 8:30 a.m.

122873

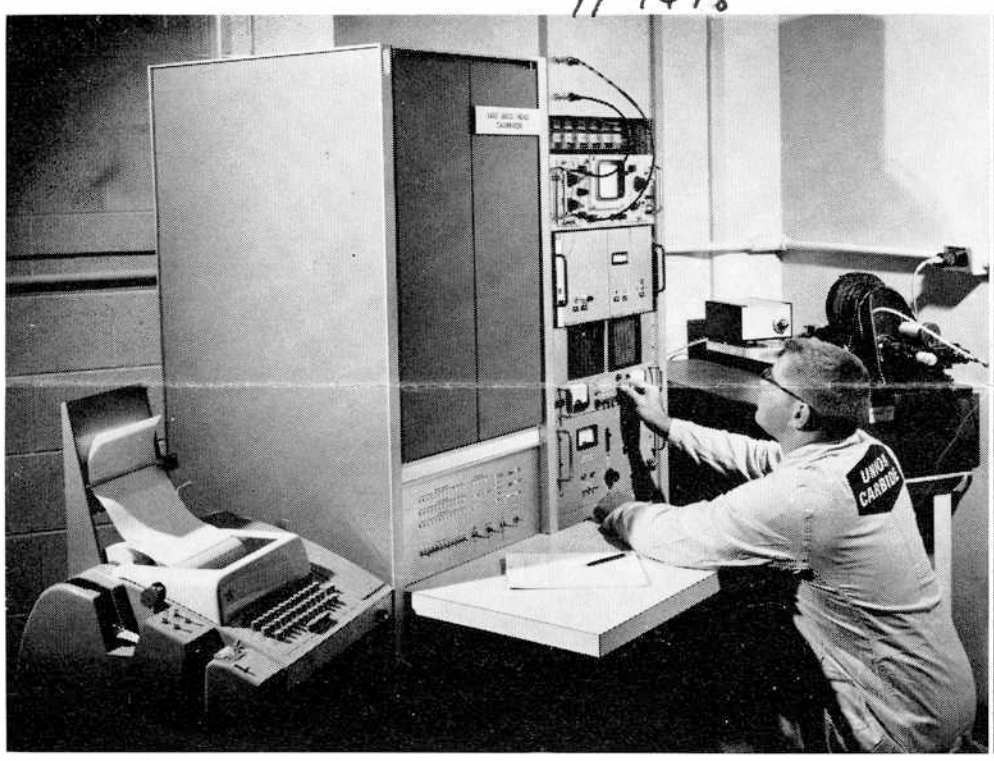
A VARIETY OF ELECTRICAL CALIBRATION INSTRUMENTS is on display at Y-12's Open House. Pictured are H. E. Morgan, Ralph Russell and V. D. Latham, in a portion of one of the calibration standards laboratories. The standards equipment in Y-12 offers astounding accuracy in devices to measure almost anything that can be measured.

11 7620



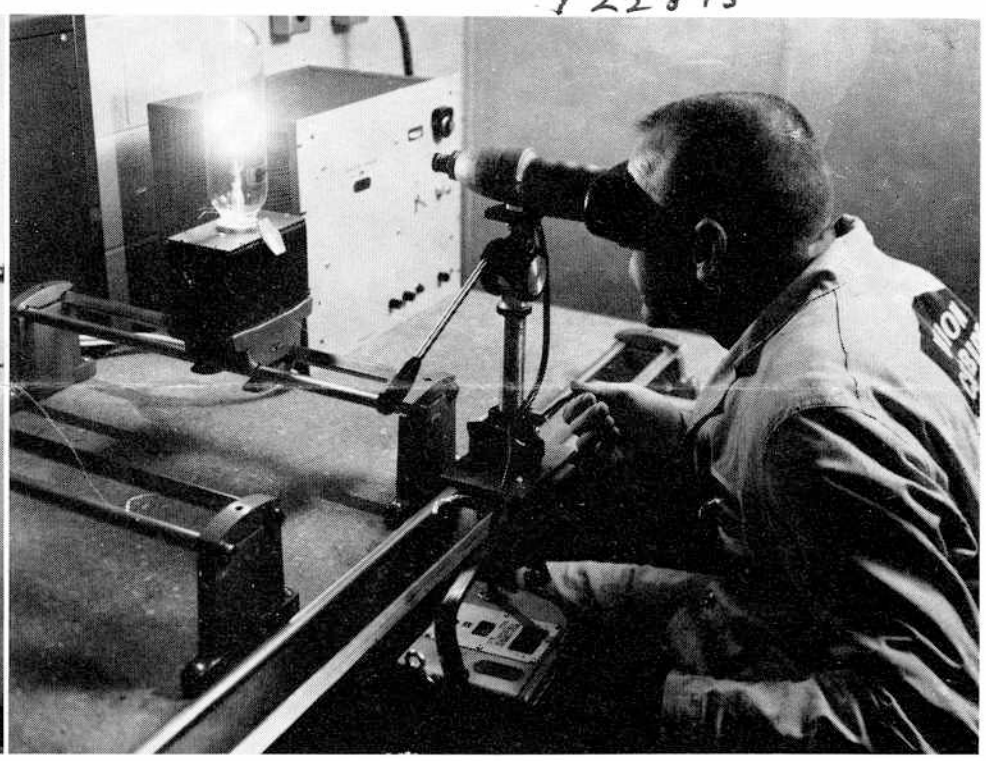
ONE OF THE NATION'S CLEANEST ROOMS is this High Purity Laboratory in Y-12. E. J. Williams Jr. and J. C. Little conduct a smoke test in this ultra-clean room. The facility is used in special research on studies relating to the nation's nuclear and space programs which require an environment as nearly free of dust as it is possible to obtain.

11 9478



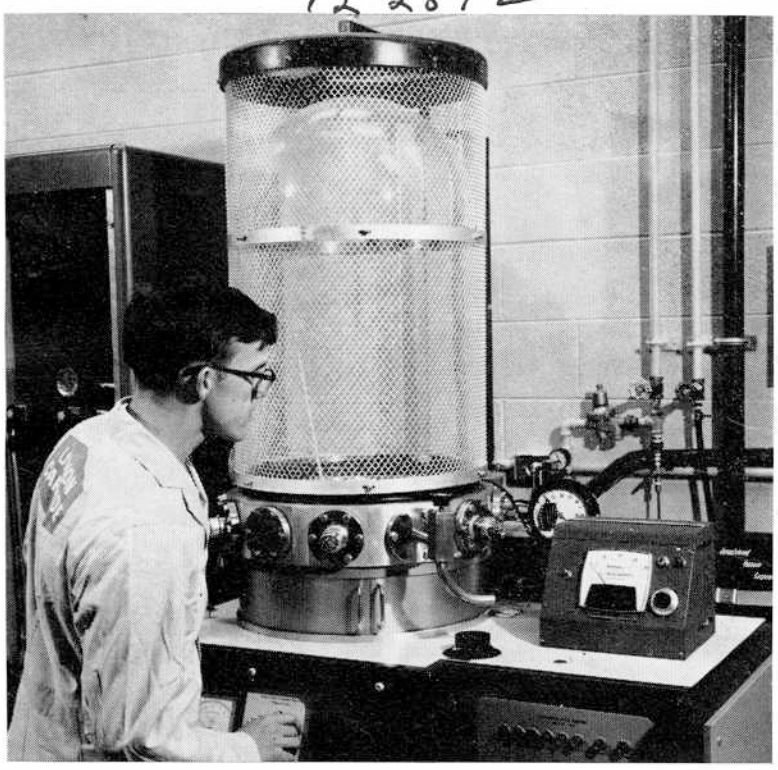
A COMPUTER-CONTROLLED CALIBRATOR, equipped with a laser inteferometer, is used in Y-12 to inspect electronic gage heads used in dimensional measuring equipment. It is accurate to within a few millionths of an inch. The calibrator is among the exhibits of the Y-12 Open House, September 2, 3. Glenn Bryson is the operator.

122875



THE PYROMETER CALIBRATION FACILITY is used to determine the accuracy of pyrometers (temperature reading instruments). The facility is one of the many seen by visitors in Y-12's Open House. J. M. Dunn is seen at the calibrator.

12 2872



THIS HIGH VACUUM CALIBRATION INSTRUMENT is one of the several hundred instruments displayed at the Oak Ridge Y-12 Plant Open House, September 2, 3.

Exact Standards Part Of Y-12 Job

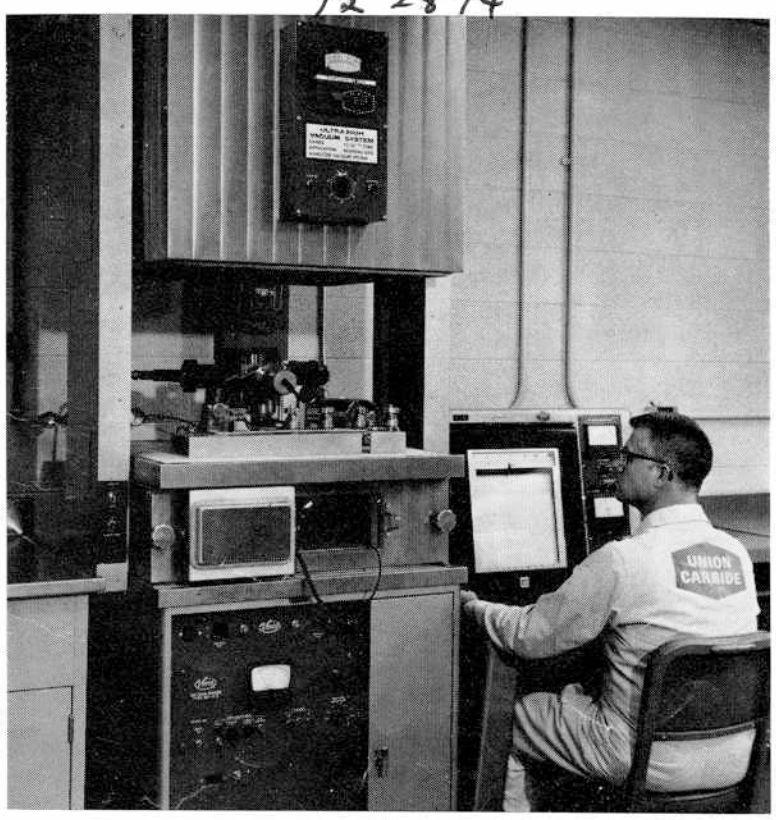
Accuracy in measurements is a vital factor in Y-12's work. This is why we have a standards laboratory.

Any housewife is familiar with standards. She has measuring cups, spoons, temperature controls, etc. around her kitchen. A variance in any of these standards may not spoil a cake, but in our work exacting measurements are very vital.

Measurements of every kind and description are constantly checked . . . temperature, humidity, hardness of metals (and their other qualities), lengths, widths, speeds . . . we even must know the exact radio-controlled time.

Part of the intricate measuring and remeasuring in Y-12 you will see on this tour. It is only a fraction of the business of standards. It will probably give you an idea of the exactness of much of our work . . . where a millionth of an inch is often part of our everyday vocabulary.

12 2874



THIS RESIDUAL GAS ANALYZER is another precision instrument which will be viewed by the public in Y-12, at Open House, September 2, 3.

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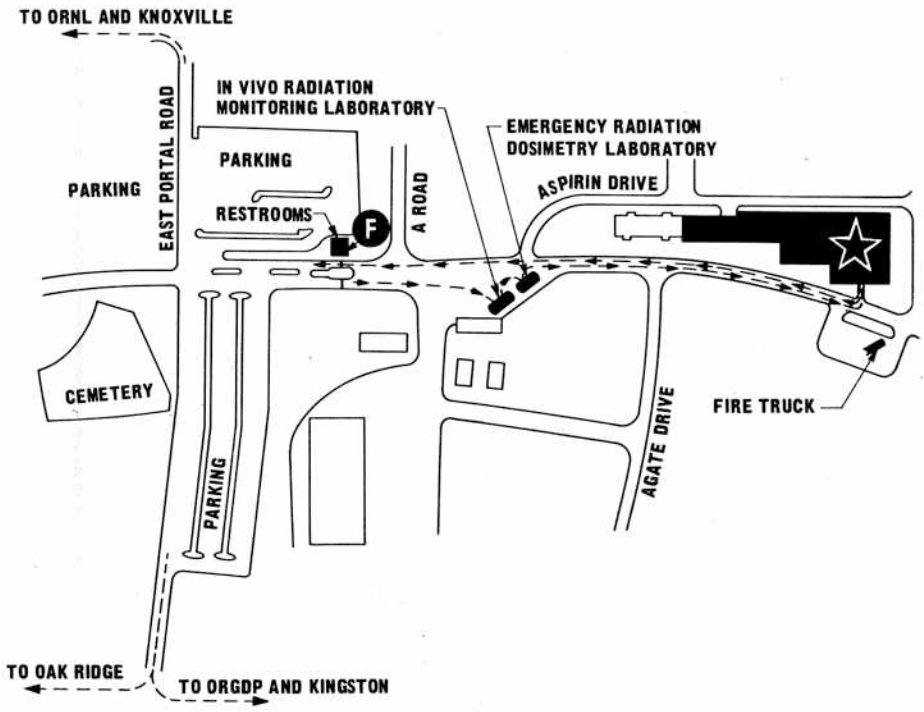
Detail Map Of Open House Tour



AREA MAP

TOUR LEGEND

★ ELECTRICAL ELECTRONICS BUILDING

Ⓐ PHYSICAL STANDARDS
1. Temperature
2. Leak Rate
3. Moisture and Relative Humidity

Ⓑ PHYSICAL STANDARDS
1. Vacuum
2. Shock
3. Flow
4. Pressure
5. Force
6. Temperature
7. Mass
8. Torque

Ⓒ ELECTRICAL STANDARDS

Ⓓ CLEAN ROOM

Ⓔ ELECTRONIC REPAIR SHOP
1. Industrial Communication Equipment
2. Gemini Instrumentation
3. Animal Implants
4. Electronic Fabrication

Ⓕ REST ROOMS

Ⓖ COIL FABRICATION SHOP

Ⓗ ELECTRICAL REPAIR SHOP

Ⓘ SAFETY

Ⓙ INSPECTION

Ⓚ ENGINEERING

Ⓛ DEVELOPMENT

Ⓜ GENERAL MACHINE SHOP

Ⓝ NONDESTRUCTIVE TESTING

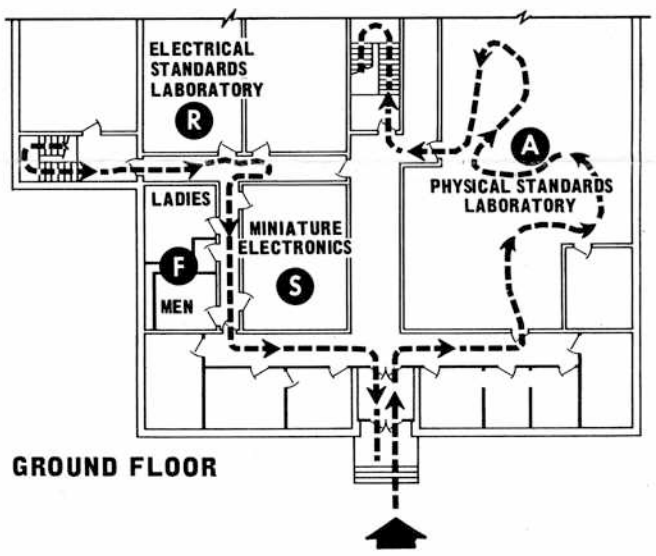
Ⓞ METAL PREPARATION

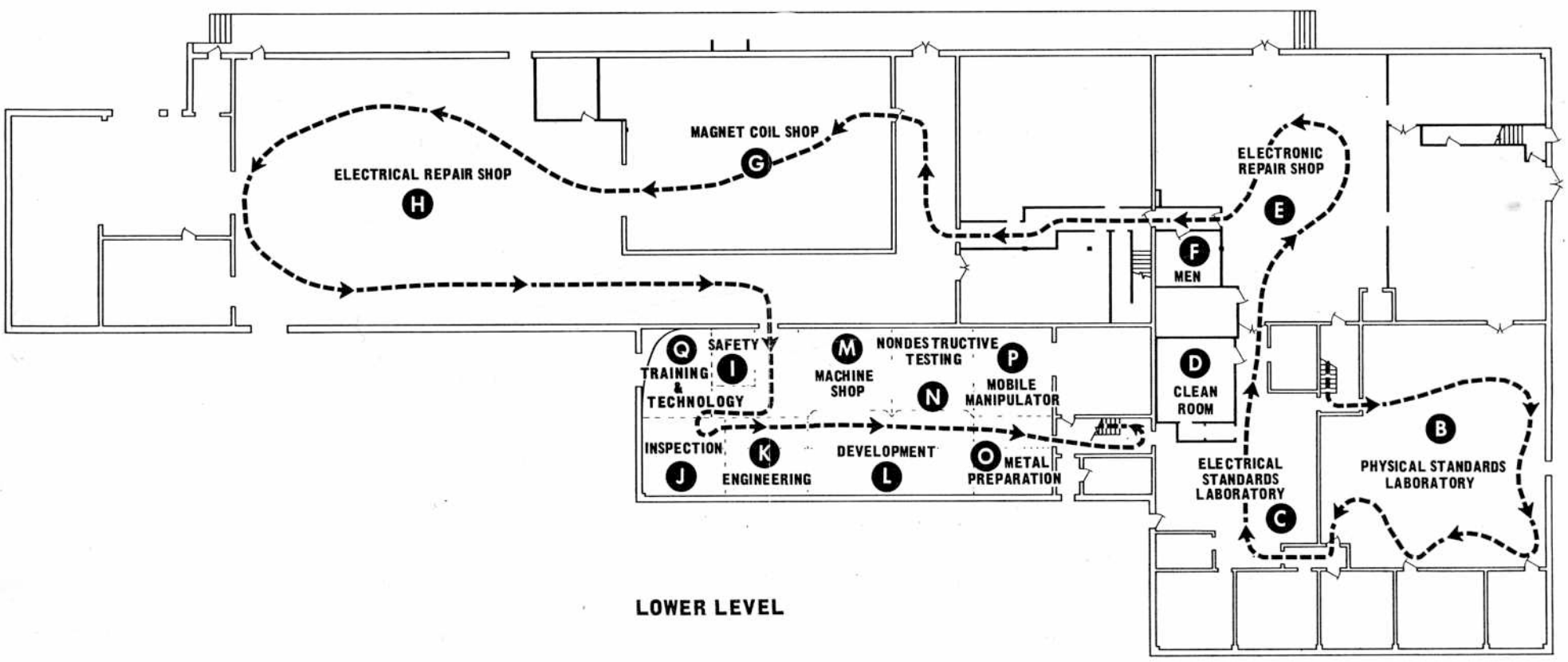
Ⓟ MOBILE MANIPULATOR

Ⓠ TRAINING & TECHNOLOGY

Ⓡ ELECTRICAL STANDARDS

Ⓢ MINIATURE ELECTRONICS





LOWER LEVEL